

# Information for you

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## Blood transfusion, pregnancy and birth

### About this information

This information is for you if you want to know more about having a blood transfusion when pregnant or shortly after you give birth. It may be helpful if you are a relative or friend of someone who is in this situation.

### What is a blood transfusion?

A blood transfusion involves giving blood or blood components from one person (known as the donor) to another person. A blood transfusion can be a life-saving process. It is usually done to replace blood that has been lost because of severe bleeding but it is also used for the treatment of severe anaemia (see the 'What is anaemia?' section below).

### Why is blood important?

Blood is important because it supplies your body with the oxygen and nutrients it needs. Blood also carries away waste products.

Blood is made up of red blood cells, platelets and white blood cells in a fluid called plasma. These components each have a different job to do:

- red blood cells contain an iron-rich pigment called haemoglobin that carries oxygen around the body
- platelets control bleeding by helping the blood to clot
- white blood cells fight infection and form part of the body's defence system (immune system).

### What is anaemia?

Anaemia is when the level of haemoglobin in your blood is lower than normal. It can cause tiredness, breathlessness, fainting, headaches and your heart to beat faster. Mild anaemia is common during pregnancy and your haemoglobin level will be routinely checked at your first pregnancy appointment and at around 28 weeks.



Severe anaemia is when the level of haemoglobin is very much lower than normal. It can make you feel very unwell with dizziness, breathlessness and chest pain.

## Why may I need a blood transfusion?

### In a non-emergency situation

You may be offered a blood transfusion in a non-emergency situation if:

- you are very anaemic just before your baby is due. If this is the case, there is a risk that, if you bleed even a small amount during birth, you may become severely anaemic.
- you bleed heavily during birth but the bleeding has stopped. If you are very anaemic and/or unwell, making it difficult for you to care for your baby, you may be offered a blood transfusion to restore your haemoglobin level. This may be soon after birth or on the postnatal ward if you are dizzy or short of breath when you are up and about. You are unlikely to be offered a transfusion unless you have symptoms and feel unwell.
- you have sickle cell disease or thalassaemia. These conditions affect your body's ability to produce healthy haemoglobin. You have an increased risk of developing severe anaemia when you become pregnant. For more information, please see RCOG patient information *Sickle cell disease and pregnancy* ([www.rcog.org.uk/en/patients/patient-leaflets/sickle-cell-disease-and-pregnancy](http://www.rcog.org.uk/en/patients/patient-leaflets/sickle-cell-disease-and-pregnancy)) and *Beta thalassaemia and pregnancy* ([www.rcog.org.uk/en/patients/patient-leaflets/beta-thalassaemia-and-pregnancy](http://www.rcog.org.uk/en/patients/patient-leaflets/beta-thalassaemia-and-pregnancy)).

### In an emergency situation

If you haemorrhage (bleed very heavily), this is an emergency situation. As a result of heavy bleeding, you can become severely anaemic. Without a transfusion to replace the blood you have lost, you could become seriously ill or even die. A haemorrhage can happen:

- early in pregnancy if you have a miscarriage or an ectopic pregnancy (when the pregnancy grows outside the womb)
- after 24 weeks of pregnancy, when it is called an antepartum haemorrhage
- during birth, or immediately after birth (known as a postpartum haemorrhage).

It is often not possible to predict or prevent a life-threatening bleed. Medication and surgical techniques will be used to try to limit the need for a blood transfusion (see RCOG patient information *Heavy bleeding after birth (postpartum haemorrhage)* ([www.rcog.org.uk/en/patients/patient-leaflets/heavy-bleeding-after-birth-postpartum-haemorrhage](http://www.rcog.org.uk/en/patients/patient-leaflets/heavy-bleeding-after-birth-postpartum-haemorrhage))). However, a blood transfusion might be needed to save your life or to prevent serious harm to your health and your baby's health.

## How safe is the blood I get?

All blood donations in the UK are tested for viruses such as hepatitis and HIV. Only blood that is free from these infections is used in a blood transfusion. The risk of getting an infection from a blood transfusion is very, very low. Further information can be found at: [www.blood.co.uk](http://www.blood.co.uk).

## How is the blood matched?

There are four main blood groups: A, B, AB and O. Blood is also rhesus (RhD) positive or negative. Your blood is tested in the laboratory and compared with the donor blood to make sure that it matches.

## What happens if I need a blood transfusion?

Most transfusions during pregnancy and after birth are red blood cells only. Very occasionally, platelets and plasma are required as well.

A cannula (small plastic tube) is placed into a vein in your hand or arm. The tube is attached to a drip, which the blood flows through. Blood for transfusion is stored in small plastic bags containing a unit of blood, which is about one-third of a litre. Each unit of blood takes about 3 hours to transfuse. In an emergency, blood may be transfused more quickly.

You will be carefully monitored before and during the transfusion. Your midwife will take your blood pressure, temperature and heart rate during the transfusion.

You may get mild side effects such as headaches, a mild fever, a rash and/or itchiness. These symptoms are relieved by drugs, such as paracetamol, and will improve within a day or so.

Very rarely, there may be more severe side effects, including difficulty in breathing, severe headaches and a sudden fall in blood pressure. This is called a transfusion reaction. If this happens, the transfusion will be stopped immediately and you will have a check-up by doctors to see why this may have happened.

## What happens afterwards?

Once all the blood has been transfused, the drip is taken down. Your haemoglobin level may be re-checked to make sure that you have received enough blood. Most women do not need another transfusion.

If the blood transfusion is given because of an emergency, you will need to stay in hospital afterwards. The length of time will depend on how quickly you get better.

## Making the decision to have a blood transfusion

If you are offered a blood transfusion, make sure that you have all the information you need to make an informed decision. Ask for information about all your options (see the 'Is a blood transfusion always my only option?' section below). If you have any concerns about having a blood transfusion, talk to your doctor or midwife.

## What happens in an emergency?

In an emergency your doctors will need to act immediately. Your obstetrician and anaesthetist may need to make the decision on your behalf for you to have a blood transfusion. You and your family will be kept fully informed about the situation.

## What if I don't want a blood transfusion?

You may decide you do not want to have a blood transfusion. This may be because of personal reasons or because of religious beliefs.

During pregnancy you may be asked if you have any objections to having a blood transfusion. A management plan can be made for your pregnancy, labour and birth. Should the need for a blood transfusion arise, your doctors will respect your wishes. Other options will be discussed but, in some cases, a blood transfusion may be the only effective treatment to save your life.

You can change your mind at any point about the use of blood.

## Is a blood transfusion always my only option?

### Iron tablets/syrup

If you have anaemia because of blood loss or lack of iron, you may be offered iron tablets or syrup to restore your haemoglobin level instead of a blood transfusion. It will take longer for you to feel completely well but you avoid the minimal risks associated with blood transfusion.

After you have had your baby, if your symptoms are mild and you have support at home, you may decide to take iron tablets or syrup rather than having a blood transfusion.

### Iron infusion

If you are unable to take iron tablets or your anaemia doesn't respond to iron tablets or syrup, you may be offered an iron infusion. The iron is given through a drip in your arm. This can be given after the first 3 months of pregnancy. It is safe for you and your baby, and side effects are rare. An iron infusion works more quickly than iron tablets or syrup.

You may be advised to take folic acid, in addition to taking iron, to raise your haemoglobin level.

### Storing your own blood for a future transfusion

It is not recommended to use your own blood for transfusion during pregnancy because it can only be stored for 5 weeks.

### Replacing your own lost blood back into your bloodstream (cell salvage)

If you have had a caesarean section delivery, the doctor may be able to collect the blood lost and replace this back into your bloodstream. Trained staff and specialist equipment are required for this, which may not be available in your hospital at all times.

## What can I do to prevent anaemia?

To produce haemoglobin, the body needs iron, vitamin B<sub>12</sub> and folic acid. If there is a lack of one or more of these, you become anaemic.

The additional demands that pregnancy makes on your body increase the risk of anaemia. You can reduce the chance of becoming anaemic by having a varied diet and enough iron in your diet (iron-containing foods include meat, poultry, eggs, vegetables and cereals).

If you are at increased risk of becoming anaemic, for example if you are carrying twins, you may be advised to take iron supplements during pregnancy.

# Making a choice

## Shared Decision Making

If you are asked to make a choice, you may have lots of questions that you want to ask. You may also want to talk over your options with your family or friends. It can help to write a list of the questions you want answered and take it to your appointment.



### Ask 3 Questions

To begin with, try to make sure you get the answers to three key questions if you are asked to make a choice about your healthcare.

1. What are my options?
2. What are the pros and cons of each option for me?
3. How do I get support to help me make a decision that is right for me?

These resources have been adapted with kind permission from the MAGIC Programme, supported by the Health Foundation

\* Ask 3 Questions is based on Shepherd HL, et al. Three questions that patients can ask to improve the quality of information physicians give about treatment options: A cross-over trial. Patient Education and Counselling, 2011;84: 379-85



<http://www.advancingqualityalliance.nhs.uk/SDM/>

## Further information and support

National Blood Transfusion Committee in England – *Patient Blood Management*: [www.transfusionguidelines.org.uk/uk-transfusion-committees/national-blood-transfusion-committee/patient-blood-management](http://www.transfusionguidelines.org.uk/uk-transfusion-committees/national-blood-transfusion-committee/patient-blood-management)

NHS Blood and Transplant (England and Wales):  
[www.blood.co.uk](http://www.blood.co.uk)

Patient information leaflets: [hospital.blood.co.uk/patient-services/patient-blood-management/patient-information-leaflets](http://hospital.blood.co.uk/patient-services/patient-blood-management/patient-information-leaflets)

Royal College of Surgeons of England – *Code of Practice for the Surgical Management of Jehovah's Witnesses*:  
[www.rcseng.ac.uk/publications/docs/jehovahs\\_witness.html](http://www.rcseng.ac.uk/publications/docs/jehovahs_witness.html)

UK Cell Salvage Action Group: [www.transfusionguidelines.org.uk/transfusion-practice/uk-cell-salvage-action-group](http://www.transfusionguidelines.org.uk/transfusion-practice/uk-cell-salvage-action-group)

RCOG patient information:

- *Heavy bleeding after birth (postpartum haemorrhage)*: [www.rcog.org.uk/en/patients/patient-leaflets/heavy-bleeding-after-birth-postpartum-haemorrhage](http://www.rcog.org.uk/en/patients/patient-leaflets/heavy-bleeding-after-birth-postpartum-haemorrhage)
- *Sickle cell disease and pregnancy*: [www.rcog.org.uk/en/patients/patient-leaflets/sickle-cell-disease-and-pregnancy](http://www.rcog.org.uk/en/patients/patient-leaflets/sickle-cell-disease-and-pregnancy)
- *Beta thalassaemia and pregnancy*: [www.rcog.org.uk/en/patients/patient-leaflets/beta-thalassaemia-and-pregnancy](http://www.rcog.org.uk/en/patients/patient-leaflets/beta-thalassaemia-and-pregnancy)

## Sources and acknowledgements

This information has been developed by the RCOG Patient Information Committee. It is based on the RCOG Green-top Clinical Guideline *Blood Transfusion in Obstetrics* (May 2015). The guideline contains a full list of the sources of evidence we have used. You can find online at: [www.rcog.org.uk/en/guidelines-research-services/guidelines/gtg47](http://www.rcog.org.uk/en/guidelines-research-services/guidelines/gtg47).

This leaflet was reviewed before publication by women attending clinics in Lanarkshire, Leeds and London, and by the RCOG Women's Network.

The RCOG produces guidelines as an educational aid to good clinical practice. They present recognised methods and techniques of clinical practice, based on published evidence, for consideration by obstetricians and gynaecologists and other relevant health professionals. This means that RCOG guidelines are unlike protocols or guidelines issued by employers, as they are not intended to be prescriptive directions defining a single course of management.

A glossary of all medical terms is available on the RCOG website at: [www.rcog.org.uk/womens-health/patient-information/medical-terms-explained](http://www.rcog.org.uk/womens-health/patient-information/medical-terms-explained).